DOCUMENT RESUME

ED 309 343 CG 021 804

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TITLE Social Support and Compliance with Hypertension Regimens.
PUB DATE 25 Feb 88
NOTE 37p.; Paper presented at the Annual Meeting of the Society of Behavioral Medicine (10th, San Francisco, CA, March 29-April 1, 1989).
PUB TYPE Information Analyses (070) -- Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Compliance (Psychology); *Family Relationship; *Helping Relationship; *Hypertension; *Physician Patient Relationship; *Social Support Groups
IDENTIFIERS *Compliance (Medical)

ABSTRACT

While research strongly suggests that social support can be effective in helping patients increase their compliance with medical regimens, many more specific questions remain unanswered. These include: (1) how are physicians using social support in an effective manner; (2) what are the most effective ways for physicians and their office staff to involve social support network members and significant others in patients' care; (3) what is the most effective way to teach physicians how to involve others in patients' treatment; (4) which patients will desire and benefit from their families' involvement and which patients won't; and (5) how can physicians economically identify the differences between these two groups. Applied research is needed in this area. It is important to investigate the mechanisms of action through which social support and compliance are correlated. Social comparison theory is important in this area. Another theoretical application is the use of "vicarious observation" by significant others, as has been done with cardiac rehabilitation patients. A major assumption which researchers in the field of social support should not take for granted is that it is easier to modify social support than to reduce stress. (ABL)

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SOCIAL SUPPORT AND COMPLIANCE WITH HYPERTENSION REGIMENS

White Paper for Workshop

On

Optimizing Patient-Practitioners Communcations

For the Treatment of Hypertension

CG 021804

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February 25, 1988

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Is there really anything left to say about social support? Or about compliance? The sheer volume and diversity of the literature on these two concepts made reviewing it somewhat like scaling the Mt. Everest of social and behavioral science. Not only did I think "What's left to write?" but "What more could either practitioners or researchers possibly need to read in these two areas?" In a review of Gottlieb's latest book on social support Minkler cites Stan Kasl's observation that social support has overtaken even stress as the number one topic in social epidemiology.[1] In the same special issue on social support and health, Schaefer, reviewing Cohen and Syme's recent book, writes, "As everyone but the most biologically-focused health professional knows by now, social support is a big deal, perhaps **the** topic of the '80's, the concept with something for everyone."[2] The same could be said, and was very recently by Haynes, about compliance. "What we do not need is more 'me too' studies of tiresome recombinations of behavior strategies to improve compliance." Yet most social science reviews on the measurement, conceptualization or research findings on these two concepts conclude by describing the literature as inadequate or lacking in some crucial way or other.[3,4] The irony of these contrasting views is inescapable to anyone doing a comprehensive search.

Aside from the voluminous nature of the literature coupled with the frequent calls for more fine-grained analyses and theory-informed interventions, there are other problems. For one, social support is such a "nice" concept, such a natural, that who could disagree with the premise that the more social support the better? Is more research really necessary, or even ethical, in terms of scarce resources? Isn't social support "the magic bullet" (as indeed it was recently, and facetiously, described)?[5] While perhaps it is vulnerable to criticism as an amorphous concept (Gottlieb actually nominated it "for the prize as social science's most polymorphous perverse locus designator"), who but a committed cynic could question such "an applepie and motherhood" idea? Is it really possible that there were hidden costs or

unanticipated side effects from such a widely accepted concept of unimpeachable integrity? Are there really skeptics left to convince or worthwhile research left to do? Indeed, as I thought about these ironies it crossed my mind that perhaps there was an inverse relationship between how much is written about an area conceptually and how much applied research is actually done. There is even a correlate, the possibility of an inverse relationship between the degree to which a concept is taken for granted as a "good thing" and the difficulty experienced when trying to translate its implications into practice.

Besides the volume of the literature and the seemingly unassailable nature of this ubiquitous, taken-for-granted, multifaceted concept, it seemed to me that in terms of this workshop I confronted yet another problem. The fact was I had to address the concerns of two almost diametrically opposed audiences. On the one hand, I was to do a "scholarly" synopsis of relevant theory and research; on the other I was to try to translate findings some believed "overly ripe" for translation into suggestions for practical, useful interventions. The irony, again, could not fail to escape one; while some questioned whether interventions based on such a foundation were "premature" without doing more research, especially of a theoretical nature,[6,7,8] others decried the torturously slow translation of research into practice.[9] It seemed to me, at one point, that I'd taken on an assignment of impossible magnitude and possibly irrelevant meaning.

Finally acknowledging that I would have to accept less than being everything and saying everything to everyone, I determined that after a brief overview of the literature I'd concentrate in the rest of this paper on defining the problem, reviewing what was already happening in practice, and end by putting forth some "suggestions for action" as well as cautions against premature action. My underlying assumption is that **knowing** social support is related to compliance and **knowing** that it is a "good" thing doesn't mean practitioners know "how to" or "what to" do with it. At the same time I was also convinced by my reading that there is much we researchers/don't know as we make the transition from global formulations and loose sets of variables to rigorously designed experimental studies[6] and closer

collaboration between theory-testing, applied research and the translation of theory and research into recommendations for practioners.[7] Some of what we don't know revolves around the theoretical bases for why social support works or methodological questions of how to measure it more accurately or, in experimental studies, how to standardize and monitor its delivery so as to make clearcut inferences.[10] For our purposes, however, I don't believe these "basic" questions are necessarily the most important ones on which more research is needed.

Instead, I think there is a dearth of applied research on how significant others are **already** being incorporated effectively by many physicians into their practices. In addition I think there are numerous practical insights from the laboratory[11] and from earlier research in this specific area[12] that are worthwhile and could be effectively built on and then evaluated.[13] Brownell and Shumaker suggest a policy of "action research... guided by theory and... responsibility evaluated".[8] We might also benefit from a review of so called "negative studies", those which have found **no** relationship between social support and compliance, as well as those "think pieces" which suggest maneuvers to avoid.[14] These seem to me to be a source of many practical, as well as intriguing, questions about social support and compliance with hypertensive regimens.

In thinking about these numerous calls for more research, as well as the volume and nature of past theoretical and empirical literature, I concluded that for this audience and these purposes this paper would contain: a very short overview of what others have written, primarily for reference purposes; a discussion of how practitioners are already "using" social support to enhance compliance and the problems, as well as the potential, this behavior might pose; some suggestions on other strategies they might consider trying, including points to be cautious about; and a final section on further **practice-oriented** research questions that could profitably be addressed at this point in time, regardless of the gaps in our knowledge.

Theory and Past Research

There have been conferences specifically on social support[15,16] and on compliance[17,18] as well as others even now in the planning stages[19] There have been special editions of journals on social support[20,21,22] and others on compliance[23] and numerous chapters in collections with other foci.[6,24,25,26] The list, which will, of necessity, omit many classic references, would be obviously incomplete without the acknowledgement of several recent, highly acclaimed books on social support[27,28] as well as less recent, but none the less classic, books on both social support[29,30,31] and compliance.[32,33]

There have been a plethora of journal articles, across disciplines, discussing the theory, dimensions and mechanism of action of social support[34,26] and compliance[35,36] as well as a few that cite problems with past research efforts.[3,36,37] More than adequately covered by others are the consequences of various conceptualizations of social support,[31,25,38,39,40,41,14,42,43] numerous schemas for classifying the dimensions of social support,[29,44,45,7] and theoretical justifications for expecting a link between social support and: psychological well-being, health, health behavior, compliance and even, specifically, compliance with anti-hypertensive medications.[46,47,48,33,49,50,51]

The possible avenues through which social support might influence compliance behavior have been reviewed and re-reviewed in great detail by others, and thus the repetition of them is avoided here. Many global, as well as a few specific, theories for the "mechanism of action" are posited; social support may: serve as a "buffer" or mediator of life stress; work by directly motivating people, through tangible aid, verbal persuasion or actual encouragement, to engage in healthier behaviors; indirectly facilitate such outcomes through individual modeling of the desirable behavior or manipulation of the environment around the individual; engender a generalized sense of increased self-efficacy, self-esteem,or sense of control; put pressure, through social influence, referent power or normative

expectations, on behavioral intentions; and even, it's been suggested, serve through "social inoculation" to protect individuals against the deleterious effects of marginality or social isolation.[52,53,54,55,56,57,58,7] Finally, several chapters or articles have discussed the operationalization, measurement, design, data collection methods, and models for statistical analysis of social support[59,60,61,62,63,64,65] and compliance.[66,35]

Many theories, in part or in whole, are invoked to "explain" the consistent association found between social support and health.[14] Haynes reports that of "41 different studies of compliance with medical regimens, 34 revealed social support to be a significant factor."[67] For many years the literature in this area has suggested that "using" the normative expectations of significant others is an important method of increasing compliance with medical care. The influence of norms on the way people think about, and behave toward, illness,[68] the patient role,[69,70] health care practitioners[71] and health behavior[72,73] was documented early on by medical sociologists and social epidemiologists.

More recently, ways in which health care professionals can incorporate this influence into their everyday efforts to increase patient compliance has been very thoroughly detailed by DiMatteo and DiNicola[33] (1982). Svarstad[74] (1986) provides us with a model of "health communication" which integrates behavioral science principles and some very practical strategies for health care practitioners to use. A few researchers have documented the efficacy of social support as a significant factor in increasing the use of health services[75,76] or decreasing the clinic drop-out rate among hypertensives.[77,78,5] Several studies have searched for, but **not** found, a significant correlation between blood pressure reduction and social support[79,80,81] while other studies **have** demonstrated an empirical relationship between social support, however variously defined, and compliance with antihypertensive regimens[82,83,84] or reduction in diastolic blood pressure.[85,77,86,42]

Perhaps the unevenness in these findings can be explained by the charge that research on social support is atheoretical[13] and that this unevenness demonstrates the need for an overarching theory

which will organize and integrate the findings[87,47,27,88] before we can possibly attempt to make sense of them, much less implement interventions. Another way, however, to view the variation is to acknowledge that several theoretical bases are necessary to explain **how** social support "works" in helping patients comply with their regimens; the search for a unifying theory may well be futile.

The Problem in Context

What are practitioners to make of all these studies? We researchers can't seriously expect them to critically examine such a vast literature, sorting out the wheat from the chaff, the beneficial from the detrimental, the anecdotal from the scientific, or the suggestions from the reservations. Despite its vastness, very few practitioners are even aware that such a body of literature exists. So what's the message here? Is it simply an informational one, that there's validation for a "new" set of strategies available to help busy practitioners invigorate, even empower, their patients to comply better with their hypertension regimens? Is it possible that, as a result of this review of others' reviews and a twenty-four hour marathon workshop, we could come up with the definitive Guide to the Use of Social Support in Practice?

The answer, probably, is "not yet", at least not without more conferences such as this one about what researchers do and don't know, and probably not without more research on the specific barriers impeding the delivery of specific types of social support in an office setting. Thus I'm in agreement with **both** Cynthia Green and Stan Kasl; while acknowledging that research has been extensive on patient compliance, Green laments that "proven strategies and approaches to compliance have not been incorporated by the medical community on a large scale."[89] At the same time Kasl asserts that "in spite of the large volume of research on stress and social support, essential evidence that translates into a set of clear cut health promotion/disease prevention activities is simply not available"(p.377).[6]

I'm not, however, of the mind that more research of just **any** type should be done. While it's somewhat unnerving to disagree with Haynes that "it is time to go back...and grapple with the basics",[90] I would be worried if researchers didn't, at the same time they heeded that call, also attempt to design demonstration projects in which they, in collaboration with forward-looking practitioners,[7] also attempted to apply what we already know[13] and then rigorously evaluate the results of those applications. In fact there were times during my review of this literature that I wondered if social support, stress, coping, and compliance wasn't one social science area where possibly there has been **too much** basic research and not enough application and program evaluation.

The time may be ripe for some rather large-scale demonstration projects. It would be more cost-efficient, however, if social scientists could first, or at least simultaneously, perhaps at a workshop such as this one,reach some sort of agreement among themselves on the following questions. What aspects of social support should be included in such trials, i.e. have been theoretically and empirically demonstrated to be effective? Can these aspects be feasibly incorporated into care delivered in the office setting? Can they be validly operationalized? Is it practical to monitor their delivery, as has been urged by other reviewers[10], so that what is **intended** to be delivered is **actually** delivered?[12] And perhaps most intriguing of all, is it even possible to "manipulate" naturally-occurring social support and still have it **remain** social support?[7] If not, is it appropriate, or even ethical, to alter people's support systems, even "for their own good"?

Hand-in-hand with this questions go several methodological challenges. The first of these, mentioned by[25] Kahn and others, is whether it is really possible to measure social support apart from social desirability and selection bias, and without the measurement error inherent in self-reports. A second methodological point, discussed by Feinstein[91] as well as by others, is that frequently social support has been declared effective (usually **not** for enhancing compliance with medication, let it be noted) among individuals who, while undoubtedly not explicitly selected for success, are at least

receptive to participating in a social support study. Furthermore, since we usually don't know how drop-outs from studies differ from completers on such important factors as whether they perceive more, or different, barriers to compliance, or have more antipathy or discomfort about involving their social network members in their medical care, any statistically significant difference reported as favoring the involvement of family members must make us very cautious about those patients to whom we apply these results.

The same is true about those physicians "willing" to participate in such trials; they must differ, possibly in some crucial ways, from those who refuse. Isn't it likely that one difference involves their receptivity to, or comfort about, using social support? We researchers know these issues of external validity by no means negate the value of findings that show "social support works" but they make us (perhaps overly so) cautious about recommending "social support" to the general public as well as to practicing physicians. The problem is compounded in two ways; often the effects of support that are found are complex and not overly strong (i.e., explain a small percentage of the variance)[7] and two, negative findings usually don't "make it" into the refereed literature. Thus the influence of social support is probably over, rather than under, estimated by published work.

While these cautions are justified, I don't believe a pessimistic view of the situation is justified. One message, I think, that should be delivered as part of a conference such as this is a hopeful one; many practitioners are already "using" social support, perhaps without knowing that that's what social scientists would call it. When Haynes suggests that practitioners "involve the patient's spouse or other partner"[92], there's no doubt that many, many physicians do this automatically, and have been doing it for years. It's only when it's viewed as a series of steps in a recommended protocol that providers are criticized for their failure to themselves adhere to strategies to increase their patients' compliance.[89]

Problems with practitioner acceptance of social support, I believe, are less likely to arise as a result of social scientists advocating an exotic, controversial or unacceptable strategy than for more pragmatic

reasons. For example, just when should "significant others" be "involved", who should be involved, and who in the practice should do "the involving"? Are there more and less effective ways to include family members, or times when friends should be included together with, or instead of, family? Do you trade off feasibility for credibility when "the support aspect" of the visit is handled by the nurse rather than the physician? Are the negative aspects of providing or receiving social support,[14,8] worse than missing the opportunity?

I believe the problem, if it's defined descriptively as a lag in translation from theory to practice, is not really due to skepticism on the part of practitioners about the value or relevancy of yet another social science idea "intruding" on medicine. Nor do I think it results from a lack of caring on researchers' parts about the need to make things "better" as a result of their research efforts. Instead, until new data or future conferences convince me otherwise, I think the problem is at least as likely to be attributable to a failure of communication about "what, when, where, who, and how to provide support" as to any other reason. Whether answers to these questions really exist (as some at this conference obviously believe they do) and just need to be "mined" from the ore of basic research on social support, or whether we social scientists really don't have them, as others may assert, will clearly be a major issue confronting conference participants.

There's no doubt that the "translation proces" has always been an issue for researchers,[93,94,95] and perhaps a particularly challenging one for social scientists, epidemiologists and public health practitioners[96,97]. While there may be some interesting data on the effect of different peer and reference groups on fostering "alien" sub-cultures" motivation to listen, accept or learn from one another, unless particularly relevant examples for our purposes can be cited I'd suggest conference participants proceed as though it is a motivational and/or informational deficit. At least those are attributions that lead to possibilities for potential improvement or amelioration of the translation

problem. Certainly anecdotal evidence would suggest that social or behavioral change is no less likely to take place in medical practice as outside it.

Moreover, we should keep in mind that some practitioners are "using social support" right now; it's not "off the wall" that others might use it, especially if it could be boiled down to a few simple specifics. Whether the latter is really possible to do will be one of the major decisions facing this conference. On the other hand, regardless of what we decide here, of course, some practitioners have never, and will never, be comfortable involving patients' families, much less their friends, in their medical care. Another one of our tasks might be to come up with some predictors of whom those practitioners might be so that little, if any, time is wasted attempting to change their behavior.

Another tack we might take is to try to understand what's going on with those individuals who, despite virtually a total absence of what social scientists might call "support", comply vigorously with their medical regimens; likewise we might study their opposites, those who virtually never comply with their regimens, despite an abundance of "social support". Observational studies on these two "marginal" groups in practice settings might at least avoid, by definition, the problem created by attempting to manipulate naturally-occurring social support without changing it into something it is not. Such studies won't, of course, necessarily solve the problem of reactive measurement, but they are familiar methods to many epidemiologists and sociologists, at least, and together with the social psychologists' experimental, laboratory-based, studies, hopefully can edge us part of the way toward understanding "what is going on" with social support and compliance with medication. I can certainly vouchsafe, after combing this literature for the last month or two, that there are few, if any, studies of these "deviant" cases, i.e. socially-isolated compliers or socially-integrated non-compliers.

Some Suggestions for Practice

Where does it leave us to acknowledge that many physicians, with greater or lesser success, already involve patients' families or significant others in their medical care, and even in their attempts to improve compliance behavior. Is the correct assumption to draw from this observation the same one to be drawn from the fact that many patients with family members involved in their care aren't models of compliance? Should we conclude that social support as an intervention strategy is an "iffy thing", a hit or miss proposition? Or is it that, in operating from taken-for-granted assumptions and "common sense", what's actually being done in practice is being done less effectively than it might be, and hence it's more a failure of implementation than the "luck of the draw"? Or is it a matter of finding "the right strategy for the right individual", an argument derived in part from "person-environment fit" theory[98,25,29] and extended and incorporated into social learning theory[99], most prominently by Bandura.[89,100,101]

Both these conceptual frameworks posit that individuals with help from others, can structure supportive environments for themselves, resist environmental pressures, and succeed best in changing their behavior, as well as sustaining that change, when not only their own cognitions but their social networks cue and reinforce the new or desirable behaviors.[102] This notion, which builds on the "specificity idea",[103] or the adage to "take the context into account", was widely endorsed in almost every article, book and conference proceedings I reviewed. Cameron and Best address it specifically with regard to experimental designs, calling for a synergistic interaction between the strategy, the patient and the environment; they also include a particularly detailed review of specific strategies practitioners can use to maximize these principles[104]. Schaefer also supports the idea, claiming that physicians will find social support "most effective when it fits the needs of the individual in a particular situation" (p.112)[105]. Finally Revenson, in a recent talk at UNC, noted, with respect to designing theoretical models to test exactly how social support might affect coping and health behaviors, that researchers, rather than trying to avoid or control "contextual factors" or "situational effects as confounders", consider "building them in."[106]

This point of view stems, in part, from the belief that social support is too global, too complex, too unstable, a concept to speak of, do research on, or manipulate in practice, as though it were just one thing. Despite its potential for being taken for granted as a strategy that can certainly do no harm, it is still much too mysterious a concept, I believe, to prescribe its use generically or universally. Even if we could deliver social support in a standard way, it would be very unlikely to be used, taken, or reacted to in a uniform manner by patients.[107] In this way, of course, it's not unlike medications and the age-old problem of "individual differences" confronted by pharmacologists, pharmacists and physicians from time in memorial.

If this is true, however, what does "buying the specificity idea" actually mean for those in practice? When one actually gets down to either experimenting with the idea of "individualized social support" or attempting to package it into what my friends from Burson and Marsteller call "meaningful deliverables" for marketing to practitioners, we're left with probably **the major question** facing this workshop. "How do you actually do it?"

Well, Levine and Green individualized support strategies by requiring each hypertensive patient's support person to write their own specific objectives to guide their facilitation of the patient's compliance[82,86]. Earp et al[85] allowed patients to involve whomever they wished to in the blood pressure monitoring process and during the nurses and pharmacists' visits, on the assumption that families, just like medical care providers, would each "provide support" (if you could, indeed, get them to do so) in non-comparable ways and thus probably with non-comparable effects. To investigate this possiblity further, patients were asked to keep diaries of who was involved when and home visitors to keep logs on the same thing. The latter's notes included an appraisal of how effective they, as well as the patients and their family members, thought involving significant others in their care was. While the idea of family involvement was over-whelmingly endorsed, a smaller (but important to note) group of

patients told the visitors, after a period of time had passed, that the family members they initially selected for the trial wanted nothing more to do with the blood pressure monitoring or home visits.[108]

There are several logical extentions of these observations. One is for physicians or their office staff to **ask** patients what's going on (as opposed to only **telling** them what they should and shouldn't do.) Some of the questions they should ask include: do they **want** family members involved; **which** ones do they want (i.e. whom do they consider "supportive", whom do they "trust" and do things together with, and whom do they actually "listen" to); if they actually **believe** it will make things better for them to involve "others" or do they simply not know how to avoid doing so; how do **they** think they could "use" family or friends to help them comply better; have they ever thought that family members or friends might "make things worse"; what "barriers", **including** peer group pressures and expectations, do they think might make it hard for them to take their pills as prescribed; and what, if anything, do they think they can do about these "pressures" or would like the physician to do about them.

As credible and respected authority figures physicians are in an excellent position to put their weight behind a set of expectations for healthy and responsible behavior by patients while at the same time being "human" and acknowledging that peer group pressures **must** make certain eating, drinking and other potentially non-compliant situations very attractive or hard to resist (as they, themselves, know from first hand experience!) If the "doctor-patient relationship" has been invested with the right meaning, which probably means that the right environment for effective communication and a sense of "trust" has been created, questions like the above, while perhaps surprising patients, should not lead to worse compliance than we know already exists. If done correctly, physicians may be able to "play off" patients' desires for **their** approval against peer-group pressures for conformity to less-than-healthy behaviors.

Practitioners must be taught how to unload the questions they ask, and to ask and re-ask them periodically, not taking for granted that "yes" this year is "yes" next year, or that involvement this year

will automatically continue into next year. Medical practices shouldn't assume social support is working at all, or working like it is suppose to, or working without side effects. Unlike prescribing medication, there are probably better ways to assess the endurence, efficacy or potency of these "social" strategies than taking the answers to questions such as the above for granted until side effects appear.

What else can practitioners do? Well, if "it's" working, they can reinforce it. If it's not, they can pass it off (unload it) as "this happens all the time" (i.e. "it works for some and not for others") and try something else. Sackett recommends that practitioners anticipate non-compliance when questioning patients about taking medication; if they did so they would, perhaps, be more "permissive" toward reports of failure to comply fully with regimens[66]. To do this, to take a more permissive or flexible attitude toward non-compliance, physicians must be taught as early as their clinical years in medical school to set reasonable objectives **for themselves** as well as for, and with, patients and their families. Half a loaf may be better than no loaf at all if it essentially works to keep people coming back for care.[109]

Another way of saying this is to target interventions at changing more intermediate outcomes than compliance, outcomes even more "removed" from the overt, long-term objective of taking medication as prescribed, and probably even more proximal than "staying in care". Such objectives might include methods (possibly contracts?) for giving patients an increased sense of control or responsibility over the alternatives they have to choose from in undertaking a complex set of recommended behaviors, and the trade-offs each choice involves. The means of achieving such objectives, however, may require such a totally revolutionary approach to clinical education (e.g. learning effective, and scientific, techniques for negotiating with patients or methods for extinguishing the seemingly ubiquitous "leading question", prestige-biased opening "You are taking your pills the way I prescribed them, aren't you?") that the feasibility of these recommendations is close to zero. This idea of selecting intermediate objectives to

target, determining what they are, and having it accepted by physicians-in-training as well as their attendings is, I believe, one of those "core issues" for our workshop to examine.

Unfortunately (unfortunate because it is a difficult recommendation to envision how, or even the likelihood that, it will be carried out) practitioners may need to go even further; they probably need to have built into their training knowledge about, and then motivation for, when, and how, to accept giving up--or at least knowing when it is time to trade off one strategy for another one. Unlike some antibiotics, social support isn't a magic bullet; it can't possibly work for everyone. In fact no one strategy can, and we are speaking here of strategies, not medication prescriptions. Strategies take time, and lots of planning and re-assessing and revising. In fact, virtually all researchers in the compliance field strongly believe that no one intervention is sufficient to improve long-term compliance; unlike, perhaps, strategies to enhance seven to ten day regimens, life-long compliance requires combinations of strategies to be successful[92,12] and flexibility in their "dispensing". For example, it may be obvious to us, and more than likely it is being done in many practices, that it is probably a good idea to use one type of support intervention for newly diaganosed hypertensives and another for habitual non-compliers with chronic co-morbidity. While a mix of strategies, individualized where possible to fit a particular individual in a particular situation, is probably imperative for any long-term behavior change, Boyce's suggestion that we examine different forms of, and ways to deliver, social support for the commonalities in meaning that probably underlie them would be a wise use of some researcher's time.[2]

Improvement in practitioners' communication skills has been demonstrated to influence compliance through an increase in patient satisfaction.[110,111] Patient satisfaction, in turn, is related not only to how credible an authority practitioners are thought to be but also to how warm and concerned their patients perceive them, how sensitive they are to patients' non-verbal cues, and how capable they are of non-verbally responding to patients' self-doubts and self-blame[89,33] or, perhaps worse, their rationalizations and denial. Along with improvements in communication and perceptual skills, a simple

increase in the amount of information and counseling physicians offer patients has been shown to significantly increase the amount of information disclosed by patients to their physicians (providing support for the "reciprocity hypothesis").

While practical sounding, the above findings don't provide us with "how to" details...how "cold" people can be made more sensitive, how busy practitioners can find "more communication time", just exactly how an environment that fosters communication can be created, or exactly what non-verbal cues are and are not effective, in what situations and for what types patients. Unfortunately there is no way to either guess at the answers to these type questions, or to dismiss them as "nit-picking".

In a seminal article, Janis demonstrates just how fine-grained the details are, and how important it is to find the answers, rather than leaving something seemingly so obvious as social support to common sense rather than to research.[11] In summarizing several laboratory studies on the effects of counselors' support on patient compliance, Janis generally endorses the efficacy of using as a motivator the "referent power" inherent in the "weak tie"[112] between practitoner and patient. He discusses particular strategies that can be used to enhance both significant others' and professionals' abilities to motivate patients to view practitioners as benevolent and accepting as well as influential. Reliance on, respect for and emotional attachement to the counselor (p. 151)[11] is necessary, he asserts, for converting counselor approval into self-approval. Basically what needs to occur is for patients to internalize the norms and expectations for them of their physicians. Patients comply, according to this theory, to win practitioners' approval, which is highly rewarding; if they are successful, their self-esteem and hopefully their sense of personal responsibility is increased. In turn, they move along a sequence of steps from dependency to self-reliance and, ultimately, to a belief in their ability to withstand internal and external pressures to conform with detrimental expectations. In the process, it is hypothesized, the desire for approval becomes a sub-goal as does the need to preserve continuity in the relationship.

Accepting for the moment this tremendously telescoped version of Janis' eloquent theory the important point for our purposes here are his findings about how counselors or practitioners build up their motivating or referent power. In a series of studies he found, perhaps not surprisingly, that positive feedback was effective in increasing compliance with recommendations but it was so powerful yet so non-discriminatory a strategy that it reinforced bad intentions as well as good. If counselors, inadvertently and often non-verbally, expressed empathy for patients' complaints about how hard it was to carry out their regimens or sympathy for patients not wanting to stick with them, this was as detrimental as their giving negative feedback.

Secondly, and perhaps extending Roter's findings, Janis found support for the impact of patients disclosing information about how they were doing to practitioners. But the impact was a relatively detrimental one when patients disclosed intimate confidences about their weaknesses and shortcomings; he hypotheses that this type disclosure may demoralize patients and make them feel conflicted about being in a dependent relationship. So, maybe we should recommend "disclosure" by both members of the doctor-patient relationship, but of a limited, relatively up-beat, type.

Another counter-intuitive finding in the Janis research was also supported by Svarstad[74] as well as others. They found that while counseling improved compliance rates, directive rather than non-directive or neutral counseling worked best. Clear-cut instructions rather than a vague, neutral or permissive approach may allow clinicians to speak with authority without appearing authoritarian.[74] Finally, the practitioner eliciting from, and considering with, the patient alternatives to the recommended behavior also worked, but only in conjunction with patients announcing their intentions to comply to an "esteemed other" (i.e. the physician). Janis hypothesizes that this strategy builds up commitment by tying the decision to behave other than in a manner concordant with announced intentions to potential disapproval from the physician and, eventually, to self-blame from patients themselves.[11]

In addition to the above precepts (i.e., give positive feedback, but careful about the timing and non-verbal cues; elicit information, but of a limited type and in a positive manner; elicit commitment from them about how they intend to behave and speculation from them about what will happen if they choose alternative behaviors; be directive but not authoritarian) there are other communication "how-to's" supported by respectable research. These include: encouraging patients to make attributions for their failure to comply not to some outside agent, but to themselves, as part of their acceptance of responsibility for their own behavior[11]; creating an environment that fosters communication and encourages questions and expressions of discouragement; keeping the message simple, with the less detail, the fewer "irrelevancies" (from the patient's perspective) and the less complex the language, the better. One very interesting observation made at a McMaster conference many years ago, whose author I long-ago forgot, was to give medication-taking instructions before writing the prescription, looking the patient in the eye, and asking him or her to repeat what was said and whether the instructions were clear and presented any problems. The point was not only the obvious one about an opportunity for feedback, etc. but the observation that the point in the visit that physicians write prescriptions gives a signal that the end of the visit has "begun"; the end of the visit may mean that patients stop listening, since "things that are perceived as real are real in their consequences"; i.e. when the pen is writing on the pad, even if the lips are moving, "the visit is over". The referent power, influence, or authority may have shifted or diminished in anticipation of resuming a non-patient role.

One might ask what all these doctor-patient communication issues have to do with family involvement and social support for medication compliance. There are several ways in which these two seemingly separate subjects, at least to my way of thinking, intersect. The first, and perhaps the most important, is that I believe practitioners can function as part of a patient's support network. They can, and do, have an enormous impact on motivating some patients to comply with their regimens; some literature suggests that even more of them may have an effect on patients' compliance behavior if they

adopt a directive, approachable, selectively-supportive manner. The fact is that physicians or their office staff are already seen by patients as sources of support or even "significant others", imbued with many of the characteristics contained in the various definitions of social support cited in the literature reviewed above. Ben-Sira found that "emotional support from one's physician is the most sought-after but least attainable resource in alleviating emotional distress associated with chronic illness".[113,114]

Indeed this very perception may create a difficult situation for patients, family members and physicians. If physicians attempt to use family members to help facilitate compliance, will patients be disappointed or, worse, see this as an attempt on physicians' parts to shirk their responsibility or involvement and "push the patient off on a family member? On the other hand, if the physician is directive, seeks commitment and an intention to comply, and attempts to increase patients' sense of responsibility and confidence that they are able to engage in the desired behavior,[101] will some patients flee to more permissive, empathetic, and seemingly "understanding" members of their social networks, thereby reinforcing their non-compliant behavior? Possible scenarios of this nature are probably endless; I only raise them here to remind us that no matter how important physicians are perceived as being, and probably no matter how effectively they behave, of course there will always be patients who will use network members to countermand or rationalize deviations from their regimens.

That bring us, therefore, to the second reason for reviewing so-called "doctor-patient communication styles" in a paper on social support and compliance. There are few, if any, protocals in use (or probably ever designed) for how professionals should interact with "natural" support network members. But there is research, and a lot of good research, on communication; if physicians can learn from, and operationalize, those findings with patients, maybe they can do so in the same way, and to the same end with patients' families and network members. Families need instruction and reassurance before they can serve as effective assistants to patients. Family members don't automatically know how to give support, or the most useful kind of support to give, just because they are family members

(somewhat analogous to people not knowing how to parent simply because they have babies). Not only must they learn when instruction, when reassurance, and when to ignore, they need someone to share the often new expectations they find thrust upon them. In essence, they are parallel, if sometimes silent, partners with physicians, and with them must learn how to do, and avoid doing, some of the same things. The communication findings reported above are probably generic, for the most part, to those perceived as having social influence, not simply those who are authorities about disease or who are "powerful others". Perhaps one topic for this workshop to discuss is whether the "communication findings" reviewed above for physicians **might be** applicable as ways to behave and not behave with non-compliant patients for family members as they are for physicians and their staff.

A third reason why a recitation of some of the communication findings is relevant to a social support and compliance paper is because physicians not only "don't have to do it all", they **can't** do it all nor would they be making effective use of their resources (both time and referent power) if they **tried** to do it all. Just as we're endorsing, by this very workshop, that it might not be effective for patients to "go it alone", but can look to family members to help them, the same applies to physicians; they have nurses and other staff members to help **them**. What can those "helpers" do? Staff can give family members "approval" (verbally and non-verbally) for asking questions, making suggestions and interpretations, raising doubts, potential barriers and possible "solutions" to anticipated compliance problems. If they, as well as physicians, learn how to do so more effectively, they can: approve, sanction, reinforce, and question patients' behaviors, as well as provide "help" to, or know when to withhold it from, patients. The point is that virtually all the medical staff needs to be involved in long-term compliance strategies if they are to be effective. (Some would even say that monitoring activities must take place beyond the traditional confines of both the family and office).[115]

But what exactly should nurses, pharmacists, patient educators, peer support and self-help groups, not to mention significant others, communicate and not communicate? It is a little too simple to say

"pretty much the type of things reviewed, suggested or recommended above for physicians". But lacking research to show why not, this probably wouldn't be a bad place to start. Of course there are some cautions, some contradictions in the research, and many unknowns. For example, the medical staff should probably try to increase their own level of support for, and communication with, patients' families rather than concentrating on trying to help improve what may appear to be deleterious interactions between patients and families. And the medical staff clearly must have some diagnostic screening capability if they are expected to identify: patients who have no support available to them; patients who, for one reason or another, underutilize or misuse the support available to them;[7] or problems around compliance that patients are encountering from their support systems.[116]

Of course recommending these things are easier said than done; in this context they should be taken as problematic and, therefore, questions for research. And in lieu of knowing whether it is the type or source or quality or simply access to support that is the crucial factor for a particular patient in a particular situation, no reason occurs to me that other office staff members not be encouraged either to "do their own experimenting" or at least to be responsive, or perhaps the word is fearless, about giving physicians feedback on what they think the doctors are and are not doing "right" with family members.

A major reason for involving other members of the office staff is that the best results from supportive interventions are found when health care providers are closely involved in supervising and/or reinforcing treatment goals and regimen instructions, especially over time. That is, non-professional or family/peer group involvement has been found to be most effective in the early months of a new regimen; over time their influence wanes.[74] Long-term, continuous reinforcement must, of practical necessity, involve health professionals other than physicians, at least to "work with" or talk to family members. Therefore, if we accept this as at least a working hypothesis, one last important point should be made about involving other members of the medical practice in social support strategies.

While physicians probably don't need to be the ones to follow through on interventions involving social support, I believe that, for those interventions to be most effectively delivered by others, physicians must **explicitly approve** and **legitimate** the staff's attempts to involve family members and friends in patients' care. That is, while physicians may delegate to other members of their staff "social support efforts" to involve, reinforce, and structure patients' compliance behavior, to have those efforts "work" physicians must bestow credibility together with the responsibility for the effort. The legitimacy of staff authority in this particular area is no less derived from the physician's influence and "power" than it is in any other area; its importance for the success, or at least effectiveness, of these type interventions (i.e. "meddling in intimate patient-family dynamics") by staff may be even more crucial then for staff "involvement" in other areas (e.g. tracking patients).

Some Warnings When Looking Ahead

Where are we then, with the topic of social support and compliance? We've very briefly overviewed theory and past research on social support and compliance; we've attempted to place the use of social networks as a "strategy" to enhance compliance with medication regimens in context; and we've spent a rather longer time making some inferences from past research, theory and the definition of the problem about what practitioners could do about it all. It's probably fair to say we've implied that there are at least the beginnings of some answers, even some partial responses that could be extended further and fleshed out by others. More explicitly, and less optimistically, we've suggested that these rudimentary answers probably can't be boiled down to a few simple specifics. We have waffled on, or avoided, saying that it's clear how some of these recommendations could be carried out. Indeed in our perceived role as catalyst for this workshop, we have thrown any number of strategy operationalization questions back to workshop participants.

Where do we go from here? We would be remiss if we did not caution, and you did not take seriously, that there is a definite "down-side" to social support. While most responsible review articles, and even empirical studies, raise the possibility that there may be a darker side to social support, probably the definitive discussion of the aversive effects of support as an intervention to improve patients' health, mitigate their sumptoms, or simply share their burdens, has been done by Shumaker and Brownell,[14]. While less has been written about the drawbacks of providing and receiving support for the purpose of enhancing compliance with medical regimens, reviewing the literature for this paper convinced me that practitioners must proceed with caution when following advice to "involve family members". Researcher, too should design studies which explicitly hypothesize about, and then test for, possible negative effects.

Conceptually it makes sense to classify the potential problems of simply taking social support for granted and "prescribing" it for every patient into two categories: a policy/structural set of "dangers" and a more person/individual set. While the latter (i.e. the "micro" consequences), in unanticipated and/or not taken seriously, obviously concerns a workshop such as this which is generally targeted at recommendations to and for individual practitioners, it is not as clear **how** we should respond to the political and philosophical "double-edged sword" aspects of providing social support. However, it seems to me that we should at least be aware that these potentially larger problems exist and are recognized by responsible researcher, writers and those with the potential to advocate or derogate what we at this conference might recommend.

Let us take the larger issues first, and at least name them. To me the most cogent question raised by skeptics about the use of social support mechanisms to help individuals reduce their levels of stress, increase their sense of well-being, or comply with their medical regimens, is whether this is the appropriate focus for interventions strategies. Does targeting changes in individual behavior, with or without the involvement of family members or other social network supports, reduce, if not negate

completely, the energies, efforts and creativity of health care professionals, researchers and people like us to develop interventions at the structural or health care system level? Does a micro or individual/family focus imply the problem is with, or in, the individual and can really only be "solved" by individuals (whether health professionals, family members or patients themselves)? Does such an approach tacitly exempt pharmaceutical companies from altering the type medications they develop to make them more feasible to comply with or absolve health care institutions from working on more efficient tracking systems, different practice patterns, or more receptive, user-friendly services? By our support for social support at the individual level, are we implictly suggesting that these more structural solutions or environmental redefinintions are less important, or perhaps too difficult, for us to do work on? These are not only moral, or ethical, questions but questions of cost-effectiveness as well. If we change even one institution's method of keeping potential drop-outs in the system, is not the time, money, and energy spent on designing and implementing those type intervenitons obviously more cost-effective than teaching every practitioner and his or her office staff how to provide "effective support" for patients? Clearly while not an either/or question, it may well come down to a question of scarce resources.

Related to this type of policy question is what I call a "gender question": The provision of social support is an important women's health issue because traditional sex roles put more burdens and expectations on women than men to monitor and support family members' compliance behavior. While we may question whether women actually exert more effective control in this area than other family members, of more importance to my way of thinking is whether the use of social support strategies could achially end up being a "bad thing" for women, a step backward, if it served to reinforce traditional sex role stereotypes. Are social support strategies to increase compliance implicitly gender-specific, and not really gender-neutral, as they appear to be? Women already drop out of exercise and "quit smoking" programs more frequently than men. Some have hypothesized that this phenomenon is due to the fact

that household responsibilities present, when it comes to personal health behaviors, a bigger, more time-consuming, barrier for women (and especially mothers) than they do for men. If these observations are confirmed in studies specifically designed to examine such effects, it seems to me we must seriously consider how to structure the delivery of support so that it does not reinforce gender stereotypes detreimental to women, or result in greater burdens on them than on men or, perhaps worst of all, contribute to a labeling effect. That is, more frequent dropping-out from disease prevention and health promotion efforts has already raised for some speculations about whether women are less motivated, less able to persist, than men. If social support interventions to increase compliance prove ineffective at best, or are actually detrimental in some ways, does not the potential to "blame women" exist?

The more micro aspects of social support as a "double-edged sword" are fully reviewed by Shumaker and Brownell and thus will only be briefly mentioned here.[14] Addressing them, however, should very definitely either be a part of this workshop, or at least part of a set of plans made during this workshop for any future conference. The potential side effects or unintended consequences of social interventions affect both the recipients and providers of it. Giving support can be frustrating, stressful, even draining, depending on whether there is only a limited pool of advice and assistance available for a particular patient. While providing the supporter with a good feeling about him or herself, it could also create stress, especially if resources are scarce. Support systems may very well need support themselves, or at least respite occasionally from such a role.

If providers have expectations for exchange or reciprocity (especially if these have not been acknowledged) and the perception is that those needs are not met, or not met in the "right way" or at the "right time", those feelings could possibly engender guilt in the recipient. Being on the receiving end of support can feel frustrating, even harassing, if acceptance somehow imposes an implicit, not-so-subtle burden. It seems to me not so far-fetched, in terms of the literature on caretakers of the elderly, to anticipate that those who accept support might do well to anticipate feeling a need to reciprocate at some

unspecified time in the future. How, exactly, patients or practitioners should handle such a situation is not at all clear.

For some people having family members involved may seem to be a violation of their privacy, or an invitation to dependency. While it would be nice if these individuals would identify these feelings about the receipt of support to their physicians, they may well not do so; and physicians, in turn, may not know how to elicit such feelings. On the opposite side of the spectrum from those guided by "rugged individualism" are those who might view involvement of family members not as meddlesome but as confirmation that they are really sick. That is, it is possible that the "assignment" of social support could be interpreted as a sign that they are really sicker than they might actually feel[106]; practitioners, therefore, run the risk, when using social support strategies, of possibly reinforcing sick role behaviors, engendering helplessness, and undermining independence coping efforts.[117] Revenson has suggested that cognitive-based coping strategies may lead to less dependency, more information-seeking, more downward comparisons and a better "fighting spirit" than emotion-based coping strategies (i.e. empathy from friends or encouragement to "let it all hang out"), which may lead more to resignation, acceptance of one's fate, avoidance and perhaps self-blame.

Finally, as Pearlin and Aneshensel discuss, the very supports that protect or buffer or provide caring may also increase patients' exposure to health risks. "Reference groups can legitimize and reinforce the perception of a situation as threatening, or they can help define the same situation as ordinary, trivial, fatalistically inexorable, or undeserving of concern, worthy only of being ignored" (p. 423).[24] Group norms are a double-edged sword, with reference groups or significant others having the potential for either helping patients redefine a situation as "not so bad, not so hard" or the opposite, i.e. as "impossible to comply with" or "not worth it." Somehow it's my feeling that such normative pressures for conforming with negative health behaviors are more troublesome for men, who are less health-conscious and preventive than women.

Summary and Conclusions

I suppose that there is at least one question of the many I raise throughout this paper that has an obvious answer, and that is the very first question I ask. There must be something left to say about social support and compliance; I reject the alternative conclusion about the preceding forty pages! While research strongly suggests that social support can be effective for helping patients increase their compliance with medical regimens, many more specific questions remain unanswered. These include: how physicians are presently using social support in an effective manner; what are the most effective ways for physicians and their office staff to involve social network members and significant others in patients' care; what is the most effective way to teach physicians how to involve others in patients' treatment; which patients want, and will benefit from, their families "involved", which ones don't, and how can physicians most economically identify the differences between these two groups.

The above questions, and a myriad of similar others, are indicative of the applied research I believe we should be doing in this area in the future. This is not to deny that there is still much basic research on social support and compliance that needs to be done. For example, we still have no good answer, especially with the "buffering hypothesis" being recently called into doubt, for the question of what exactly social support does for hypertensive patients. It is important, in an intellectual but also very definitely in a cost-effectiveness way, to continue investigating the mechanisms of action through which social support and compliance are correlated with one another. If social support serves to increase self-esteem, heighten self-confidence, improve assertiveness or in some other manner strengthen patients' coping abilities, then knowing this means our interventions will ultimately have a greater impact if they are designed to enhance those variables directly, rather than designed to influence compliance behavior itself.

One theory ripe for testing in this area is social comparison theory. What impact do upward vs. downward comparisons have on hypertensive patients' abilities to comply with their regimens? Can social support and social comparisons be used, possibly in conjunction with peer or buddy groups, to enhance compliance?

Another interesting theoretical application is the use of "vicarious observation" by significant others, as has been done with cardiac rehabilitation patients.[118]

A major assumption researchers in the field of social support should not take for granted is that it is easier to modify social support than reduce stress. Several researchers reviewed in this paper disagree with one another[7,6] about where we should place our emphasis. The answer is linked, in part, to the issue I raise earlier about not overlooking structural or policy level changes, or exculpating the system, as we search for micro or individual answers. Finally, it is wise to remember that no matter what suggestions we come up with for practitioners to follow, we are really asking them to do something very difficult. We are asking them to walk a fine line between viewing social support as: a) a magic bullet; b) something that "can do no harm"; c) a terribly complex, almost mysterious "something" that may take the training of a clinical psychologist to "do right"; and d) something that they may be doing already. It is probably too much to expect that a one day workshop can sort out these questions and clarify this concept. However, it certainly can help us get started.

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